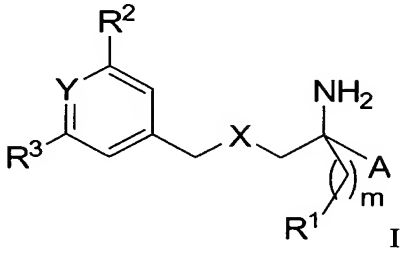
Listing of Claims

The listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Original) A compound of formula (I):



I

wherein:

X is O or NH;

Y is CH or N;

A is selected from the group consisting of

(1) hydrogen,

(2) $-C_{1-10}$ alkyl,

(3) $-C_{2-10}$ alkenyl, and

(4) $-C_{2-10}$ alkynyl,

wherein said alkyl, alkenyl or alkynyl is unsubstituted or substituted with one or more

(a) halo,

(b) $-C_{3-8}$ cycloalkyl,

(c) –OH,

(d) –CN,

(e) $-O-C_{1-10}$ alkyl,

(f) phenyl, or

(g) heteroaryl selected from the group consisting of pyrazinyl, pyrazolyl, pyridazinyl, pyridyl, pyrimidinyl, pyrrolyl, tetrazolyl, furanyl, imidazolyl, triazinyl, pyranyl, thiazolyl, thienyl, thiophenyl, triazolyl, oxazolyl, isoxazolyl, thiazolyl, oxadiazolyl, indolyl, quinolinyl, isoquinolinyl, benzimidazolyl and benzoxazolyl,

and said phenyl and heteroaryl is unsubstituted or substituted with one or more

(i) halo,
(ii) –OH,
(iii) –CN,
(iv) –O-C_{1-10} alkyl,
(v) –C_{1-10} alkyl,
(vi) –C_{2-10} alkenyl,
(vii) –C_{2-10} alkynyl, or
(viii) –C_{3-8} cycloalkyl;

R^1 is (1) aryl selected from the group consisting of phenyl and napthyl, or
(2) heteroaryl selected from the group consisting of pyrazinyl, pyrazolyl, pyridazinyl, pyridyl, pyrimidinyl, pyrrolyl, tetrazolyl, furanyl, imidazolyl, triazinyl, pyranyl, thiazolyl, thienyl, thiophenyl, triazolyl, oxazolyl, isoxazolyl, thiazolyl, oxadiazolyl, indolyl, quinolinyl, isoquinolinyl, benzimidazolyl and benzoxazolyl,

wherein said aryl or heteroaryl is unsubstituted or substituted with one or more

(a) halo,
(b) –C_{1-10} alkyl,
(c) –C_{2-10} alkenyl,
(d) –C_{2-10} alkynyl,
(e) –OH,
(f) –CN,
(g) –O-C_{1-10} alkyl, or
(h) –C_{3-8} cycloalkyl;

R^2 is selected from the group consisting of:
(1) (R^4-SO_2)N(R^7)-, wherein R^4 is

(a) –C_{1-10} alkyl,
(b) –C_{2-10} alkenyl,
(c) –C_{2-10} alkynyl, or
(d) –C_{3-8} cycloalkyl,

wherein said alkyl, alkenyl, alkynyl and cycloalkyl is unsubstituted or substituted with one or more

(i) halo,
(ii) –OH,

(iii) –CN,
(iv) –O-C_{1-10} alkyl,
(v) –C_{1-10} alkyl,
(vi) –C_{2-10} alkenyl,
(vii) –C_{2-10} alkynyl,
(viii) –C_{3-8} cycloalkyl,
(ix) aryl selected from the group consisting of phenyl and napthyl, or
(x) heteroaryl selected from the group consisting of pyrazinyl, pyrazolyl, pyridazinyl, pyridyl, pyrimidinyl, pyrrolyl, tetrazolyl, furanyl, imidazolyl, triazinyl, pyranyl, thiazolyl, thienyl, thiophenyl, triazolyl, oxazolyl, isoxazolyl, thiazolyl, oxadiazolyl, indolyl, quinolinyl, isoquinolinyl, benzimidazolyl and benzoxazolyl,

and said aryl and heteroaryl is unsubstituted or substituted with one or more
(i) halo,
(ii) –OH,
(iii) –CN,
(iv) –O–C_{1-10} alkyl,
(v) –C_{3-8} cycloalkyl,
(vi) –C_{1-10} alkyl,
(vii) –C_{2-10} alkenyl, or
(viii) –C_{2-10} alkynyl;

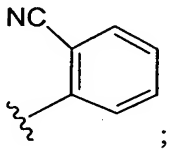
R^7 is selected from the group consisting of
(a) hydrogen,
(b) –C_{1-10} alkyl,
(c) –C_{2-10} alkenyl, or
(d) –C_{2-10} alkynyl;
wherein said alkyl, alkenyl or alkynyl is unsubstituted or substituted with one or more
(i) halo,
(ii) –OH,
(iii) –CN,
(iv) –O-C_{1-10} alkyl,
(v) –C_{3-8} cycloalkyl,
(vi) aryl selected from the group consisting of phenyl and napthyl, or

(vii) heteroaryl selected from the group consisting of pyrazinyl, pyrazolyl, pyridazinyl, pyridyl, pyrimidinyl, pyrrolyl, tetrazolyl, furanyl, imidazolyl, triazinyl, pyranyl, thiazolyl, thienyl, thiophenyl, triazolyl, oxazolyl, isoxazolyl, thiazolyl, oxadiazolyl, indolyl, quinolinyl, isoquinolinyl, benzimidazolyl and benzoxazolyl,

wherein said cycloalkyl, aryl or heteroaryl is unsubstituted or substituted with one or more

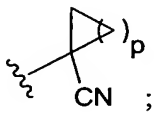
(i) halo,
(ii) –OH,
(iii) –CN,
(iv) –O–C_{1-10} alkyl,
(v) –C_{3-8} cycloalkyl, or
(vi) aryl selected from the group consisting of phenyl and napthyl;

(2)



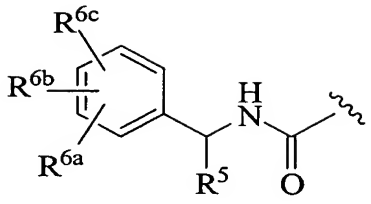
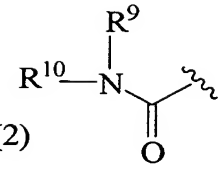
; and

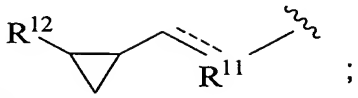
(3)



;

R^3 is selected from the group consisting of

(1)  ; (2)  ; and

(3)  ;

wherein R^5 is selected from the group consisting of

(1) $-C_{1-10}$ alkyl,

(2) $-C_{2-10}$ alkenyl,

(3) $-C_{2-10}$ alkynyl

wherein said alkyl, alkenyl or alkynyl is unsubstituted or substituted with one or more halo;

R^{6a}, R^{6b}, and R^{6c} are independently selected from the group consisting of:

(1) hydrogen,

(2) halo,

(3) $-C_{1-10}$ alkyl,

(4) $-C_{2-10}$ alkenyl,

(5) $-C_{2-10}$ alkynyl,

(6) –OH,

(7) –CN,

(8) $-C_{3-8}$ cycloalkyl, and

(9) $-O-C_{1-10}$ alkyl;

R^9 and R^{10} are independently selected from the group consisting of

(1) hydrogen,

(2) $-C_{1-10}$ alkyl,

(3) $-C_{2-10}$ alkenyl,

(4) $-C_{2-10}$ alkynyl, or

(5) $-C_{3-8}$ cycloalkyl;

wherein said alkyl, alkenyl, alkynyl or cycloalkyl is unsubstituted or substituted with one or more

(a) halo,

(b) –OH,

(c) –CN,

(d) –C_{3-8} cycloalkyl,

(e) –O–C_{1-10} alkyl

or R^9 and R^{10} are joined together with the nitrogen atom to which they are attached to form a pyrrolidine ring, which is unsubstituted or substituted with one or more

(a) –C_{1-10} alkyl,

(b) –C_{2-10} alkenyl,

(c) –C_{2-10} alkynyl,

(d) –C_{3-8} cycloalkyl,

(e) – $(CH_2)_n$-phenyl,

(f) –CN,

wherein said alkyl, alkenyl or alkynyl is unsubstituted or substituted with one or more

i) halo,

ii) –OH,

iii) –CN,

iv) –O-C_{1-10} alkyl, or

v) –C_{3-8} cycloalkyl;

and said cycloalkyl and phenyl is unsubstituted or substituted with one or more

i) halo,

ii) –C_{1-10} alkyl,

iii) –C_{2-10} alkenyl,

iv) –C_{2-10} alkynyl,

v) –OH,

vi) –CN,

vii) –C_{3-8} cycloalkyl, or

viii) –O–C_{1-10} alkyl;

R^{11} is selected from the group consisting of

(1) –CH–,

(2) –O–, and

(3) –NR^8–,

provided that when R^{11} is –CH– the dotted line forms a bond and when R^{11} is –O– or –NR^8–the dotted line is absent;

R^8 is selected from the group consisting of

(1) hydrogen,

(2) $-C_{1-10}$ alkyl,

(3) $-C_{2-10}$ alkenyl,

(4) $-C_{2-10}$ alkynyl, or

(5) $-CH_2$–phenyl,

wherein said alkyl, alkenyl, alkynyl or phenyl is unsubstituted or substituted with one or more

(a) halo,

(b) –OH,

(c) –CN,

(d) $-C_{3-8}$ cycloalkyl,

(e) $-O-C_{1-10}$ alkyl;

R^{12} is selected from the group consisting of

(1) hydrogen,

(2) $-C_{1-10}$ alkyl;

(3) $-C_{2-10}$ alkenyl,

(4) $-C_{2-10}$ alkynyl,

(5) halo,

(6) $-C_{3-8}$ cycloalkyl,

(7) aryl selected from the group consisting of phenyl and napthyl, and

(8) heteroaryl selected from the group consisting of pyrazinyl, pyrazolyl, pyridazinyl, pyridyl, pyrimidinyl, pyrrolyl, tetrazolyl, furanyl, imidazolyl, triazinyl, pyranyl, thiazolyl, thienyl, thiophenyl, triazolyl, oxazolyl, isoxazolyl, thiazolyl, oxadiazolyl, indolyl, quinolinyl, isoquinolinyl, benzimidazolyl and benzoxazolyl,

wherein said aryl and heteroaryl is unsubstituted or substituted with one or more

(a) halo,

(b) –OH,

(c) –CN,

(d $-O-C_{1-10}$ alkyl,

(e) $-C_{3-8}$ cycloalkyl,

(f) $-C_{1-10}$ alkyl,

(g) $-C_{2-10}$ alkenyl, or

(h) $-C_{2-10}$ alkynyl;

m is 0, 1, 2 or 3;

n is 0, 1, 2, 3 or 4;

p is 1, 2, 3 or 4;

provided that A is not CH_2OH;

and pharmaceutically acceptable salts thereof.

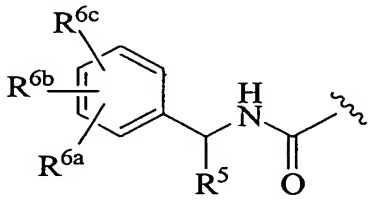
Claim 2 (Original) The compound of Claim 1 wherein m is 1 and R^1 is phenyl.

Claim 3 (Original) The compound of Claim 1 wherein R^2 is $(R^4\text{-}SO_2)N(R^7)$-.

Claim 4 (Original) The compound of Claim 3 wherein R^4 and R^7 are methyl.

Claim 5 (Original) The compound of Claim 1 wherein A is unsubstituted $C_{1\text{-}6}$ alkyl or unsubstituted $C_{2\text{-}6}$ alkenyl.

Claim 6 (Original) The compound of Claim 1 wherein R^3 is



Claim 7 (Original) The compound of Claim 1 wherein Y is CH.

Claim 8 (Original) The compound of Claim 1 wherein Y is N.

Claim 9 (Original) The compound of Claim 1 wherein X is O.

Claim 10 (Original) A compound selected from the group consisting of

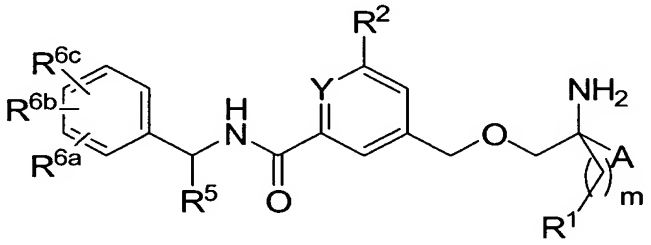
3-[(2-amino-2-methyl-3-phenylpropoxy)methyl]-N-[(1R)-1-(4-fluorophenyl)ethyl]-5-[methyl(methylsulfonyl)amino]benzamide;
3-{[(2-amino-2-benzylpent-4-en-1-yl)oxy]methyl}-*N*-[(1*R*)-1-(4-fluorophenyl)ethyl]-5-[methyl(methyl sulfonyl)amino]benzamide;
3-{[(2-amino-2-benzylpentyl)oxy]methyl}-*N*-[(1*R*)-1-(4-fluorophenyl)ethyl]-5-[methyl(methyl sulfonyl)amino]benzamide;
3-{[(2-amino-2-benzylhexyl)oxy]methyl}-*N*-[(1*R*)-1-(4-fluorophenyl)ethyl]-5-[methyl(methyl sulfonyl)amino]benzamide;
N-(4-[(2-amino-2-methyl-3-phenylpropoxy)methyl]-6-{benzyl[(2-methylcyclopropyl)methyl]amino}pyridin-2-yl)-*N*-propylmethanesulfonamide;

N-(4-[(2-amino-2-methyl-3-phenylpropoxy)methyl]-6-{[(2-methylcyclopropyl)methyl]amino}pyridin-2-yl)-*N*-propylmethanesulfonamide;
N-(4-[(2-amino-2-methyl-3-phenylpropoxy)methyl]-6-{methyl[(2-methylcyclopropyl)methyl]amino}pyridin-2-yl)-*N*-propylmethanesulfonamide;
4-[(2-amino-2-methyl-3-phenylpropoxy)methyl]-*N*-[1-(4-fluorophenyl)ethyl]-6-[(methylsulfonyl)(propyl)amino]pyridine-2-carboxamide;
N-{4-[(2-amino-2-methyl-3-phenylpropoxy)methyl]-6-[(2-phenylpyrrolidin-1-yl)carbonyl]pyridin-2-yl}-*N*-propylmethanesulfonamide;
N-{3-({[(2*R*)-2-amino-2-methyl-3-phenylpropyl]oxy}methyl)-5-[(*Z*)-2-(2-methylcyclopropyl)vinyl]phenyl}-*N*-propylmethanesulfonamide;
3-[(2-amino-2-methyl-3-phenylpropoxy)methyl]-*N*-(1,1-dimethylprop-2-yn-1-yl)-5-[(methylsulfonyl)(propyl)amino]benzamide;
3-[(2-amino-2-methyl-3-phenylpropoxy)methyl]-5-[(methylsulfonyl)(propyl)amino]-*N*-(2,2,2-trifluoro-1-phenylethyl)benzamide;
N-{3-[(2-amino-2-methyl-3-phenylpropoxy)methyl]-5-[(2-phenylpyrrolidin-1-yl)carbonyl]phenyl}-*N*-propylmethanesulfonamide;
N-{3-[(2-amino-2-methyl-3-phenylpropoxy)methyl]-5-[(2-propylpyrrolidin-1-yl)carbonyl]phenyl}-*N*-propylmethanesulfonamide;
3-[(2-amino-2-methyl-3-phenylpropoxy)methyl]-5-[(methylsulfonyl)(propyl)amino]-*N*,*N*-dipropylbenzamide;
3-[(2-amino-2-methyl-3-phenylpropoxy)methyl]-*N*-(1-methylbut-2-yn-1-yl)-5-[(methylsulfonyl)(propyl)amino]benzamide;
N-(3-[(2-amino-2-methyl-3-phenylpropoxy)methyl]-5-{[(2,2,2-trifluoro-1-phenylethyl)amino]methyl}phenyl)-*N*-propylmethanesulfonamide;
3-[(2-amino-2-methyl-3-phenylpropoxy)methyl]-N-[(1R)-1-(4-fluorophenyl)ethyl]-5-[propyl(methylsulfonyl)amino]benzamide;
3-[(2-amino-3-phenylpropoxy)methyl]-*N*-[1-(4-fluorophenyl)ethyl]-5-[methyl(methylsulfonyl)amino]benzamide;
3-((2-Amino-2-methyl-3-phenylpropoxy)methyl)-5-(1-cyanocyclopentyl)-N-((*R*)-1-(4-fluorophenyl)ethyl)benzamide;
3-((2-Amino-2-methyl-3-phenylpropoxy)methyl)-5-(1-cyanocyclopentyl)-N-((*R*)-1-phenylethyl)benzamide;
3-((-2-Amino-2-methyl-3-phenylpropoxy)methyl)-N-benzyl-5-(1-cyanocyclopentyl)benzamide;
3-((2-Amino-2-methyl-3-phenylpropoxy)methyl)-5-(1-cyanocyclopentyl)-N-(2-phenylpyrrolidin-1-yl)benzamide;
3-((2-Amino-2-methyl-3-phenylpropoxy)methyl)-N-(1-(3-chlorophenyl)ethyl)-5-(1-cyanocyclopentyl)benzamide;
3-((2-Amino-2-methyl-3-phenylpropoxy)methyl)-5-(1-cyanocyclopentyl)-N-(2-propylpyrrolidin-1-yl)benzamide;
3-((2-Amino-2-methyl-3-phenylpropoxy)methyl)-5-(1-cyanocyclopentyl)-N,N-dipropylbenzamide;
3-((2-Amino-2-methyl-3-phenylpropoxy)methyl)-5-(1-cyanocyclopentyl)-N-(pent-3-yn-2-yl)benzamide;
3-((2-Amino-2-methyl-3-phenylpropoxy)methyl)-N-(1-(2-chlorophenyl)ethyl)-5-(1-cyanocyclopentyl)benzamide;
3-((2-Amino-2-methyl-3-phenylpropoxy)methyl)-5-(1-cyanocyclopentyl)-N-(2-ethynylpyrrolidin-1-yl)benzamide;
3-((2-Amino-2-ethyl-3-phenylpropoxy)methyl)-N-((R)-1-(4-fluorophenyl)ethyl)-5-(*N*-methyl-*N*-(methylsulfonyl)amino)benzamide;
3-((2-Amino-2-benzyl-3-phenylpropoxy)methyl)-N-((R)-1-(4-fluorophenyl)ethyl)-5-(*N*-methyl-*N*-(methylsulfonyl)amino)benzamide;
3-((2-Amino-2-difluoromethyl-3-phenylpropoxy)methyl)-N-((R)-1-(4-fluorophenyl)ethyl)-5-(*N*-methyl-*N*-(methylsulfonyl)amino)benzamide;

3-((2-Amino-2-fluoromethyl-3-phenylpropoxy)methyl)-N-((R)-1-(4-fluorophenyl)ethyl)-5-(*N*-methyl-*N*-(methylsulfonyl)amino)benzamide;
3-{[(2-amino-2-methyl-3-phenylpropyl)amino]methyl}-*N*-[(1*R*)-1-(4-fluorophenyl)ethyl]-5-[methyl(methylsulfonyl)amino]benzamide;
N-[4-{[(2-amino-2-methyl-3-phenylpropyl)amino]methyl}-6-({[2-methylcyclopropyl]methyl}amino)pyridin-2-yl]-N-methylpropane-2-sulfonamide;

and pharmaceutically acceptable salts thereof.

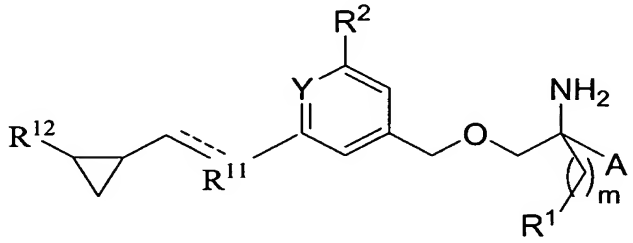
Claim 11 (Original) The compound of Claim 1 of formula (II)



II

wherein Y, A, R^1 , R^2 , R^5 , R^{6a}, R^{6b}, and R^{6c} and m are as defined in Claim 1;
and pharmaceutically acceptable salts thereof.

Claim 12 (Original) The compound of Claim 1 of formula (III)

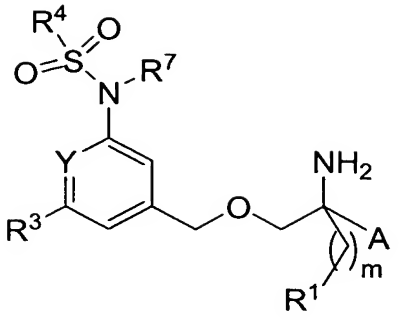


(III)

wherein Y, A, R^1 , R^2 , R^5 , R^{11}, R^{12} and m are as defined in Claim 1;
and pharmaceutically acceptable salts thereof.

Claim 13 (Original) The compound of Claim 12 wherein Y is N and R^{11} is NR^8.

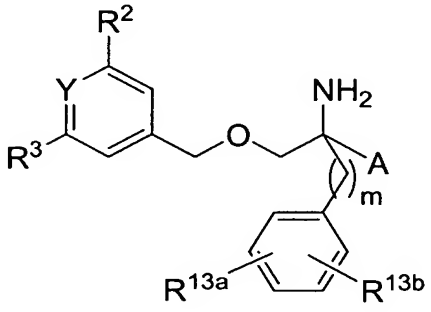
Claim14 (Original) A compound of Claim 1 of formula (IV)



(IV)

wherein Y, A, R^1 , R^3 , R^4, R^7 and m are as defined in Claim 1;
and pharmaceutically acceptable salts thereof.

Claim 15 (Original) The compound of Claim 1 of formula (V)



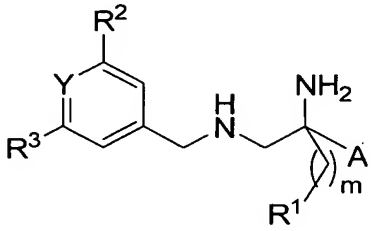
(v)

wherein R^{13a} and R^{13b} are independently selected from the group consisting of

(a) halo,
(b) $-C_{1-10}$alkyl,
(c) –OH,
(d) –CN,
(e) $-O-C_{1-10}$alkyl,
(f) hydrogen, and
(g) $-C_{3-8}$ cycloalkyl;

m is 1; and
Y, A, R^2 and R^3 are as defined in Claim 1;
and pharmaceutically acceptable salts thereof.

Claim 16 (Original) The compound of Claim 1 of formula (VI)



(VI)

wherein Y, A, R^1 , R^2 , R^3 and m are as defined in Claim 1; and pharmaceutically acceptable salts thereof.

Claim 17 (Original) A pharmaceutical composition comprising a therapeutically effective amount of a compound of Claim 1 and a pharmaceutically acceptable carrier.

Claim 18 (Original) A method for inhibition of β-secretase activity in a mammal in need thereof which comprises administering to the mammal a therapeutically effective amount of a compound of Claim 1.

Claim 19 (Original) A method for treating Alzheimer's disease in a patient in need thereof comprising administering to the patient a therapeutically effective amount of a compound of Claim 1.